

# Plant Pathology PhD Handbook

## Fall 2012

Enrollment .....	2
PhD Advisor and Rotations .....	3
Plant Pathology's PhD Committee Requirements .....	4
Graduate School Committee Requirements .....	4
Satisfactory Progress.....	4
Foundation Courses .....	5
Departmental Course Requirements and Certification .....	6
Graduate School's Minor Requirements.....	7
Plant Pathology's Minor Requirements .....	7
Yearly Research Presentations.....	8
Written Qualifying Exam .....	8
Oral Preliminary Exam .....	9
Helpful Links for Writing Your Research Proposal and Dissertation.....	10
Dissertator Status Requirements .....	10
Final Research Seminar .....	11
Final Oral Examination .....	11
Dissertation Formatting Requirements .....	12
Final Departmental Requirements for Graduation.....	12
Depositing Your Dissertation .....	12
Policy on Exceptions to Requirements.....	12

## Enrollment

### *Fall and Spring Semester Enrollment Requirements*

<b>Enrollment Types</b>	<b>PhD Pre-dissertator</b>	<b>PhD Dissertator</b>
<b>Domestic unfunded</b>	2 credits minimum*	3 credits
<b>International students regardless of funding</b>	8 credits minimum (unless you have an exception from ISS)	3 credits
<b>RA or fellowship through Plant Pathology</b>	8 credits minimum	3 credits
<b>33.33% TA or PA through Plant Pathology</b>	6 credits minimum	3 credits
<b>50% TA or PA through Plant Pathology</b>	4 credits minimum	3 credits
<b>funded through another department/program</b>	Check with that department	3 credits
<b>Other or uncertain</b>	Check with the Student Services Coordinator	3 credits

\*this does not qualify as "full time enrollment," full time enrollment for a PhD Pre-dissertator when unfunded is 8 credits minimum

*Summer Enrollment Requirements:* Students must be enrolled at UW-Madison if they are using university facilities, including faculty and staff time<sup>o</sup>.

<b>Enrollment Types</b>	<b>PhD Pre-dissertator</b>	<b>PhD Dissertator</b>
<b>Unfunded – not graduating</b>	Not required%#	Not required%#
<b>Unfunded – graduating</b>	2 credits minimum# in the 8 week (DHH) session	3 credits in the 8 week (DHH) session
<b>International student unfunded and in their first semester</b>	4 credits	na
<b>RA or 12 month fellowship through Plant Pathology</b>	2 credits minimum in the 8 week (DHH) session	3 credits in the 8 week (DHH) session
<b>33.33% TA or PA through Plant Pathology</b>	Not required%#	Not required%#
<b>50% TA or PA through Plant Pathology</b>	Not required%#	Not required%#
<b>funded through another department/program</b>	Check with that department	3 credits in the 8 week (DHH) session
<b>Other or uncertain</b>	Check with the Student Services Coordinator	Check with the Student Services Coordinator

#this does not qualify as "full time enrollment," full time enrollment for a PhD Pre-dissertator when unfunded is 4 credits minimum, for a Dissertator full time enrollment is always 3 credits

For all PhD Pre-dissertators the maximum enrollment is 12 credits, however in the summer session the credit total cannot exceed the number of weeks in the session, for example you cannot enroll for 9 credits in an 8-week session.

A valid enrollment minimum does not count the following types of courses

- courses numbered below 300
- courses taken pass/fail
- audited courses

If a student must take over 12 credits, including the types of courses above that do not count towards the enrollment minimum, they must submit a credit overload request: <http://www.grad.wisc.edu/education/forms/overload.html>.

The above information was taken from the Graduate School's Academic Policies and Procedures website which can be found online at:

<http://www.grad.wisc.edu/education/acadpolicy/guidelinesindex.html>.

## **PhD Advisor and Rotations**

Most Ph.D. students enter as rotation students in Plant Pathology. Plant Pathology PhD rotation students typically rotate through three laboratories for their first semester in graduate school. The rotation schedule will be set prior to student's arrival and will be based upon research interests expressed in their application and during their interviews. As rotation students learn more about Plant Pathology, they may wish to change which labs they rotate through or rotate through additional laboratories. These changes are often possible and should be made by consulting the professor the student wishes to rotate with and the chair of the academic affairs committee. Since rotation students are not yet placed into a laboratory during their first semester, the chair of the academic affairs committee is their academic advisor.

Laboratory rotations are a trial period for both the student and the professor to determine whether the projects available fit the student's interests and if the training environment in the laboratory fits the student. Professors will offer positions in their laboratory groups based upon these rotations and students will have the option of choosing whether to join one of the laboratories that they have rotated through. If after three rotations a student has not yet found a laboratory to join, and if another professor is willing to host a rotation student, a fourth rotation may occur. Students must find an advisor in order to continue as a Plant Pathology PhD student.

Some students enter the Plant Pathology program directly admitted into a specific faculty member's program and will start working with that faculty member immediately upon arrival at UW-Madison. To be directly admitted to a research program, the student and faculty member must arrange funding and the time that the student will enter the laboratory prior to arrival of the student at UW-Madison.

## **Plant Pathology's PhD Committee Requirements**

Each graduate student, after discussion with his or her major professor, must establish a Research Committee to provide guidance and oversight over the course of the student's graduate studies. The Graduate School establishes criteria for committee composition (see below).

The Executive Committee or its equivalent of a program/department is responsible for approving the composition of all graduate committees.

Minimum graduate school requirements for the graduate committee are as follows:

1. The chair or co-chair of the committee must be Graduate Faculty from the student's major program.
2. Doctoral committees must have at least five members, for of who must be Graduate Faculty or former Graduate Faculty up to one year after resignation or retirement. At least one of the five members must be from outside of the student's major field (often from the minor field).

The required fifth member of a doctoral committee, as well as any additional members, all retain voting rights. They may be from any of the following categories, as approved by the program Executive Committee or its equivalent: Graduate Faculty; Faculty from other institutions.

## **Graduate School Committee Requirements**

To see the Graduate School's rules on research/advisory committees go to <http://www.grad.wisc.edu/education/acadpolicy/guidelines.html#31>.

## **Satisfactory Progress**

The department of Plant Pathology follows the Graduate School's guidelines regarding satisfactory progress in terms of grades and GPA. Graduate students are expected to maintain a GPA of 3.0 or higher every term for courses in the 300-level and above. If a student does not meet the minimum GPA the Graduate School will put them on probation and the student may ultimately be suspended if they are not able to raise their GPA to the minimum level. The same holds true if a graduate student carries two or more incomplete grades over multiple semesters.

- Graduate School's information on satisfactory progress: <http://www.grad.wisc.edu/education/acadpolicy/guidelines.html#155>

- Graduate School's information on GPA:  
<http://www.grad.wisc.edu/education/acadpolicy/guidelines.html#85>
- Graduate School's information on probation:  
<http://www.grad.wisc.edu/education/acadpolicy/guidelines.html#141>
- Graduate School's information on incomplete grades:  
<http://www.grad.wisc.edu/education/acadpolicy/guidelines.html#104>

## Foundation Courses

Foundation courses are basic science courses, usually completed prior to entering graduate school. If foundation course requirements have not been fulfilled beforehand, they must be completed as early as possible in the graduate student's course of study. Students may not double count their foundation courses towards their PhD required courses or towards their minor courses.

The foundation courses include:

- Biological Science: students are required to take one course in three of the following four areas
  - Genetics
  - Plant Anatomy/Morphology
  - Plant Physiology
  - General Ecology
- Chemistry
  - General chemistry – two semesters including lab
  - Organic chemistry – including lab
  - Biochemistry – must be undergraduate upper-level course
- Physics
  - General Physics – two semesters including lab
- Mathematics
  - Introductory calculus
  - Statistics – including analysis of variance and regression analysis

Students should speak with their advisor as soon as possible regarding any foundation course deficiencies. Students will need to list their foundation courses on the certification paperwork (see below). A course waiver form must be submitted in order to request a waiver for a foundation course. The course waiver form should be submitted to the Student Services Coordinator for consideration by the Curriculum Committee.

At the written request of the student's Certification Committee after careful consideration of the intent of the foundation course requirements, a PhD student who has transferred into our department with a transferring faculty member may

be exempted by the Curriculum Committee from some PhD student foundation course requirements.

## Departmental Course Requirements and Certification

All Plant Pathology PhD students are required to complete the following major requirement courses:

- **Plant Pathology 300 Introduction to Plant Pathology**, *4 credits* (fall)
- **Plant Pathology 505 Plant-Microbe Interactions: Molecular and Ecological Aspects**, *3 credits* (spring)
- **Plant Pathology 558 Biology of Plant Pathogens**, *3 credits* (spring, odd years)
- **Plant Pathology 559 Diseases of Economic Plants**, *3 credits* (summer, odd years)
- **Plant Pathology 602 Ecology, Epidemiology and Control of Plant Diseases**, *3 credits* (fall, even years)
- **Plant Pathology 799 Practicum in Plant Pathology Teaching**, *2 or more credits* (fall, spring) – the teaching assignment is given by the Curriculum Committee, students who need special consideration for their teaching assignment should contact the Student Services Coordinator
- **Plant Pathology 875 Special Topics**, *2 credits* (fall, spring) – students are required to take at least two one-credit Special Topics seminar classes, similar special topics or journal club classes offered by other department can be used as a substitute
- **Plant Pathology 923 Seminar**, *2 credits* (fall, spring) – students must take this twice, once for their proposal seminar and once for their defense seminar

If a major requirement has been met at another institution, the Curriculum Committee must approve a completed course waiver form (available at [http://www.plantpath.wisc.edu/gradforms/course\\_waiver.doc](http://www.plantpath.wisc.edu/gradforms/course_waiver.doc)).

The remainder of the course requirements for the PhD degree in Plant Pathology will be selected to meet the student's specific needs and to ensure breadth and depth as determined through consultation with his/her major professor and other members of the research committee.

Students should meet with their research committee to complete the certification paperwork by the end of the first year. The certification paperwork is available online at [http://www.plantpath.wisc.edu/gradforms/phd\\_certification.doc](http://www.plantpath.wisc.edu/gradforms/phd_certification.doc). Once the certification paperwork has been approved a signed copy must be submitted to the Student Services Coordinator for final approval by the Curriculum Committee. If changed need to be made after the certification has been

approved by the Curriculum Committee a student must submit a course substitution form ([http://www.plantpath.wisc.edu/gradforms/course\\_sub.doc](http://www.plantpath.wisc.edu/gradforms/course_sub.doc)).

To see course descriptions go to the My Course Guide available through MyUW (<http://my.wisc.edu/>).

## Graduate School's Minor Requirements

The Graduate School requires PhD students to complete a minor before they can be granted dissertator status. There are two minor options:

- *Option A External Minor.* Requires a minimum of nine credits in a single department/program. Selection of this option requires the approval of the minor department/program. Students interested in an Option A minor should contact the minor department for more information on the minor requirements (<http://www.grad.wisc.edu/education/mas/toc.html>).
- *Option B Distributed Minor.* Requires a minimum of nine credits in one or more departments/programs and can include course work in the major department/program. Selection of this option requires the approval of the major department/program.

Option A minors appear on the transcript with the name of the minor (i.e. Statistics) which an Option B minor always appears on the transcript as Distributed. For more information on the Graduate School's minor requirements go to <http://www.grad.wisc.edu/education/acadpolicy/guidelines.html#126>. There are some students who are exempted from the minor requirement, please contact the Student Services Coordinator ([rodock@wisc.edu](mailto:rodock@wisc.edu)) for more information.

## Plant Pathology's Minor Requirements

Generally the Plant Pathology department follows the Graduate School's guidelines regarding the minor; however, there are some additional requirements that the department has in regards to the Option B minor. These requirements are

- Students must earn a minimum of nine graduate level credits from at least two departments other than Plant Pathology.
- At least three credits of the minor requirement must be earned at UW-Madison.
- One course cross-listed between Plant Pathology and another department can be used for the minor as long as it is not a required course for the Plant Pathology degree.

Students are required to list their minor courses on the certification paperwork. All minor courses must be completed before a student can become a dissertator.

## Yearly Research Presentations

Students are required to make at least one public oral presentation per year. Some of the options for this include:

- Proposal and defense seminars in Plant Pathology 923,
- Presentations in Plant Pathology 875 courses,
- Friday at Four presentations and/or
- Presentations at annual scientific meetings.

## Written Qualifying Exam

The Qualifying Exam is designed to test student understanding of broad concepts and core principles of Plant Pathology. Students will normally take the Qualifying Exam after taking Plant Pathology 505, 558, 559 and 602, or their equivalents, as well as completing all foundation requirements. Typically this will be a little over two years after starting graduate school, but could be sooner for students entering with a Master's degree.

Exam questions are written each year by the faculty and will cover the following topics:

- I. Ecology and epidemiology,
- II. Genetics and molecular biology,
- III. Etiology and disease physiology and
- IV. Disease control.

The exam will be given every January and will be administered in two sets of four questions with four hours for each set of questions. The exam questions may be open, limited-open, or closed book, according to the wishes of the question's author. Students will write exams on an internet-disabled computer. The exams will be typed and will be graded blind.

The questions will be graded on a pass/fail basis and students must pass seven of the eight questions. If a student does not pass seven questions, he or she may retake the qualifying exam the following year. If the second exam is failed, the student will not be allowed to continue as a PhD student in Plant Pathology.

Copies of previous exam questions will be stored in the Plant Pathology Library as an exam preparation resource.

Students requiring special assistance to read questions or write the exam must make arrangements with the qualifying committee at least four weeks prior to the exam. Students whose native language is not English may use a bilingual dictionary during the Qualifying Exam.

## Oral Preliminary Exam

Each PhD candidate must pass an Oral Prelim Exam. The goals of this exam include a demonstration that a student knows the general background of the topic under study, understands the hypotheses that are being tested by his or her own research, knows the possible impacts of the research, and has developed back up plans should critical aspects of the project fail. In addition to being a demonstration of knowledge, this exam also provides for valuable feedback from the thesis committee on the proposed work and allows the student to better develop a thesis project.

The Oral Prelim exam should be taken within two weeks after a student's proposal seminar. The exam is given by the student's thesis committee and led by the Oral Prelim chair, to be selected from among the Plant Pathology faculty of the student's research committee. The major professor may not chair the exam and the Oral Prelim exam must be completed by the end of the third year. The Oral Prelim is generally undertaken after all other requirements for PhD candidacy have been met, other than the annual research presentations, thesis completion, and thesis defense, but may be taken prior to completion of coursework or the written qualifying exam if the student has a well-developed research project and the student and advisor think that the student is likely to succeed in the Oral prelim.

Students will need to prepare an oral prelim proposal for their committee. The proposal should include a 250 word abstract, background information, clearly stated hypotheses, the approaches that will be used to test the hypotheses, a description of the expected findings, limitations of the proposed work, and backup plans.

The proposal shall be:

1. no more than 15 pages, including all text, figures, and tables; the abstract and references cited are not included in this page limit
2. no more than 6 lines per inch and no less than one inch page margins
3. pages should be numbered

After prior consultation with and agreement from the advisor and thesis committee, a student may alter these guidelines, including increasing the length of the research proposal if needed to best describe the proposed research.

Students need to give a copy of the 250 word abstract to the Student Services Coordinator for their file.

Exam questions usually focus on the student's research and the developing area of expertise. The Oral Prelim is an opportunity to pinpoint areas that may be beneficial to study in more detail.

The decision to pass the student for the Oral Prelim, made by the student's research committee, is based on the soundness of the proposal as well as on the student's ability to reason, think critically, and communicate clearly. If the student's performance is not satisfactory the first time the student takes the exam, the student may take one additional Oral Prelim, ordinarily to be completed no later than four months after the first, but extendable up to one year by petition to the student's research committee. The chair of the student's Oral Prelim must communicate the committee's findings to the failing student in writing within one week of either exam, outlining the areas in which the student was judged to be lacking in proficiency. Students who fail the Oral Prelim exam on the second attempt will be required to terminate their studies in the Plant Pathology Department.

The student is required to request their preliminary exam warrant through the Student Services Coordinator ([rodock@wisc.edu](mailto:rodock@wisc.edu)) at least three weeks before their exam.

Dissertator status is granted after successful completion of all coursework requirements, the qualifying exam, and the preliminary exam.

## Helpful Links for Writing Your Research Proposal and Dissertation

The UW Writing Center's Writing Handbook  
<http://writing.wisc.edu/Handbook/index.html>

Rules on writing ethics and plagiarism  
[http://writing.wisc.edu/Handbook/QPA\\_plagiarism.html](http://writing.wisc.edu/Handbook/QPA_plagiarism.html)

## Dissertator Status Requirements

Students will receive an email from the Graduate School when they are granted dissertator status. This email contains important information about the rules of being a dissertator. A copy of this email can be found online at <http://www.grad.wisc.edu/education/acadpolicy/guidelines.html#56>. **It is very important that students follow all of the rules of being a dissertator otherwise they may lose their dissertator status.** The three most important rules of being a dissertator are:

- Students must maintain continuous registration by enrolling for three credits every fall and spring (and summer if funded) until they graduate, otherwise they will be assessed a degree completion fee.

- Students should not enroll in any courses except research credits or a required departmental seminar unless they have an extenuating circumstance.
- Students have five years from the date that they passed prelims to defend and deposit their dissertation. If a student does not meet this requirement they may be required to pass their prelim exam again before they will be allowed to receive their PhD degree.

Questions regarding dissertator status rules and requirements should be directed to the Student Services Coordinator ([rodock@wisc.edu](mailto:rodock@wisc.edu)).

### **Final Research Seminar**

The research seminar should be presented on the day of the final exam or in the preceding six months. Members of the research committee should attend this seminar.

The seminar should:

- provide the audience with an appreciation of the context of the research
- provide a clear statement of the goals and objectives that were addressed
- provide a brief but clear explanation of the methods and experimental approach
- present the data obtained and the method of analysis
- present interpretations and conclusions based on the data

Students must register for Plant Pathology 923 Seminar in their final semester for their final research seminar requirement. Students graduating in the summer should enroll in Plant Pathology 923 and present during the spring semester.

### **Final Oral Examination**

When a student has completed the thesis research and has written the dissertation to the satisfaction of the major professor and the research committee, the student schedules the Final Oral exam. The oral examination covers the thesis and the general field of the major and minor studies. When the candidate passes the examination, the committee signs the final oral defense warrant. If significant thesis revisions are requested, the committee may wait for these revisions to be completed prior to signing the warrant.

The candidate may not take the final oral examination until all other requirements for the degree have been satisfied.

The student is required to request their Final Oral Defense Packet through the Student Services Coordinator ([rodock@wisc.edu](mailto:rodock@wisc.edu)) at least five weeks before their oral defense.

## **Dissertation Formatting Requirements**

The Plant Pathology department does not have distinct formatting requirements; instead students should follow the Graduate School's requirements which can be found in the Final Oral Defense Packet or online at "A Guide to Preparing Your Doctoral Dissertation" website at <http://www.grad.wisc.edu/education/completedegree/pguide.html>.

## **Final Departmental Requirements for Graduation**

After a student passes their Final Oral Exam there are a few more departmental requirements that need to be completed before graduation.

- *Departmental dissertation copies* – a hard copy of the dissertation must be submitted to the Plant Pathology Library.
- *Final warrant copy* – students must make a copy of their final warrant for the Student Services Coordinator before depositing the warrant with the Graduate School.

## **Depositing Your Dissertation**

Students must deposit the dissertation and graduation forms (found in the Final Oral Defense Packet) with the Graduate School by the degree deadline date. For information on how to schedule the deposit appointment along with all of the depositing requirements go to "The Three D's: Deadlines, Defending, & Depositing Your PhD Dissertation" at <http://www.grad.wisc.edu/education/completedegree/ddd.html>.

It may take up to three months after graduation term for a degree to be posted to a student's record.

## **Policy on Exceptions to Requirements**

Requests for exceptions to those requirements set by the Plant Pathology department will be considered by the appropriate departmental committee. Requests should be submitted in writing to the Student Services Coordinator by the faculty advisor. The request should include a justification statement and a detailed explanation of the substitution proposed to meet the requirement. If the request is to substitute a course for one already approved on the certification form, the only action necessary is to fill out the "Course Substitution Form."

The following requirements for the Ph.D. degree are under the purview of the UW Graduate School and cannot be modified:

- composition of the PhD Graduate Committee
- standards defining Academic Satisfactory Progress
- minimum credit requirement
- standards defining dissertator status

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